



Product Change Notification / RMES-05GWNV962

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**Date:**

23-Jan-2023

**Product Category:**

Linear Regulators, Power Management - Power Switches

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 5127 Final Notice: Qualification of G700 as a new mold compound material for selected MIC20xxx and MIC5159 device families available in 6L SOT-23 package assembled at STAR assembly site.

**Affected CPNs:**

[RMES-05GWNV962\\_Affected\\_CPN\\_01232023.pdf](#)  
[RMES-05GWNV962\\_Affected\\_CPN\\_01232023.csv](#)

**Notification Text:**

**PCN Status:**Final Notification

**PCN Type:**Manufacturing Change

**Microchip Parts Affected:**Please open one of the files found in the Affected CPNs section.  
Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

**Description of Change:**Qualification of G700 as a new mold compound material for selected MIC20xxx and MIC5159 device families available in 6L SOT-23 package assembled at STAR assembly site.

**Pre and Post Change Summary:**

	Pre Change	Post Change
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<b>Assembly Site</b>	Stars Microelectronics (Thailand) Public Company Limited  (STAR)	Stars Microelectronics (Thailand) Public Company Limited  (STAR)
<b>Wire Material</b>	Au	Au
<b>Die Attach Material</b>	84-1LMISR4	84-1LMISR4
<b>Molding Compound Material</b>	G600	G700
<b>DAP Surface Prep</b>	NiPdAu with Roughened	NiPdAu with Roughened
<b>Lead-frame Material</b>	A194	A194

**Impacts to Data Sheet:**None

**Change Impact:**None

**Reason for Change:**To improve manufacturability by qualifying G700 as a new mold compound material.

**Change Implementation Status:**In Progress

**Estimated First Ship Date:**February 28, 2023 (date code: 2309)

Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

**Time Table Summary:**

	May 2022					->	January 2023					February 2023				
Workweek	1 9	2 0	2 1	2 2	2 3		1	2	3	4	5	6	7	8	9	10
Initial PCN Issue Date	X															
Qual Report Availability										X						
Final PCN Issue Date										X						
Estimated Implementation Date															X	

**Method to Identify Change:**Traceability code

**Qualification Report:**

Please open the attachments included with this PCN labeled as PCN\_#\_Qual\_Report.

**Revision History:** May 06, 2022: Issued initial notification.

January 23, 2023: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on February 28, 2023.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

**Attachments:**

[PCN\\_RMES-05GWNV962\\_Qual\\_Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

**Terms and Conditions:**

If you wish to receive Microchip PCNs via email please register for our PCN email service at our [PCN home page](#) select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the [PCN FAQ](#) section.

If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.



**MICROCHIP**

**QUALIFICATION REPORT SUMMARY  
RELIABILITY LABORATORY**

**PCN#: RMES-05GWNV962**

**Date  
January 11, 2023**

**Qualification of G700 as a new mold compound material for selected  
MIC20xxx and MIC5159 device families available in 6L SOT-23  
package assembled at STAR assembly site.**



## MICROCHIP PACKAGE QUALIFICATION REPORT

<b>Purpose</b>	Qualification of G700 as a new mold compound material for selected MIC20xxx and MIC5159 device families available in 6L SOT-23 package assembled at STAR assembly site.
<b>CCB</b>	5127
<b>CN</b>	E000107953
<b>QUAL ID</b>	R2200979 Rev A.
<b>MP CODE</b>	28805Y6AXA02
<b>Part No.</b>	MIC5159YM6-TR
<b>Bonding No.</b>	BD-000674 Rev.01
<b><u>Package</u></b>	
<b>Type</b>	6L SOT-23
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	41 x 72 mils
<b>Material</b>	A194
<b>Surface</b>	NiPdAu with Roughened
<b>Process</b>	STAMP
<b>Lead Lock</b>	No
<b>Part Number</b>	07S4172ST00
<b>Treatment</b>	RT+UPG
<b><u>Material</u></b>	
<b>Epoxy</b>	84-1LMISR4
<b>Wire</b>	Au wire
<b>Mold Compound</b>	G700
<b>Plating Composition</b>	NiPdAu



## MICROCHIP PACKAGE QUALIFICATION REPORT

### Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
STAR230600040.000	TMPE222088150.500	2219P40
STAR230600041.000	TMPE222088150.500	2219P99
STAR230700001.000	TMPE222088150.500	2220P9V

### Result

Pass     Fail     \_\_\_\_\_

6L SOT-23 assembled by STAR pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard.



# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		0/231		Parts had been pre-conditioned at 260°C 77 units / lot
	<b>Electrical Test:</b> +25°C System: TMT		231(0)	0/231	Pass	
	<b>Bond Strength:</b> Wire Pull (>3.00 grams)		15(0)	0/15	Pass	
	Bond Shear (>21.10 grams)		15(0)	0/15	Pass	
UNBIASED-HAST	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		0/231		Parts had been pre-conditioned at 260°C 77 units / lot
	<b>Electrical Test:</b> +25°C System: TMT		231(0)	0/231	Pass	
HAST	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 5.5 Volts System: HAST 6000X	JESD22-A110		0/231		Parts had been pre-conditioned at 260°C 77 units / lot
	<b>Electrical Test:</b> +25°C System: TMT		231(0)	0/231	Pass	



# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		0/45		
	<b>Electrical Test:</b> +25°C System: TMT		45(0)	0/45	Pass	
<b>Solderability Temp 215°C</b>	<b>Steam Aging:</b> Temp 93°C, 1Hrs System: SAS-3000 Solder Dipping: Solder Temp. 215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22		
				0/22		
				0/22	Pass	
<b>Solderability Temp 245°C</b>	<b>Steam Aging:</b> Temp 93°C, 1Hrs System: SAS-3000 Solder Dipping: Solder Temp. 245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22		
				0/22		
				0/22	Pass	
<b>Physical Dimensions</b>	Physical Dimension, 10 units / 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
<b>Bond Strength Data Assembly</b>	Wire Pull (>3.00 grams)	Mil. Std. 883-2011	30(0) Wires	0/30	Pass	
	Bond Shear (>21.10 grams)	CDF-AEC-Q100-001	30(0) bonds	0/30	Pass	

RMES-05GWNV962 - CCB 5127 Final Notice: Qualification of G700 as a new mold compound material for

Affected Catalog Part Numbers(CPN)

MIC2005A-1YM6-TR  
MIC2005A-2YM6-TR  
MIC2009A-1YM6-TR  
MIC2009A-2YM6-TR  
MIC2019A-1YM6-TR  
MIC2005-0.5YM6-TR  
MIC2005-0.8YM6-TR  
MIC2005-1.2YM6-TR  
MIC2005M-0.5YM6-TR  
MIC2007YM6-TR  
MIC2008YM6-TR  
MIC2009YM6-TR  
MIC2015-0.5YM6-TR  
MIC2015-0.8YM6-TR  
MIC2015-1.2YM6-TR  
MIC2017YM6-TR  
MIC2018YM6-TR  
MIC2019YM6-TR  
MIC2019A-2YM6-TR  
MIC5159-1.8YM6-TR  
MIC5159YM6-TR